

REMARKS

Claims 1-14, 17-28, and 35-42 are pending in this application. By this Reply, Applicant has amended claims 3, 9, 12, 14, 22, 25, and 35, canceled claims 15, 16, and 29-34 without prejudice or disclaimer, and added new claims 41 and 42. The originally filed disclosure fully supports these amendments. For example, Fig. 9 shows an intake valve in an intermediate position. No new matter has been added.

Claim 14 was objected to for an informality. Claims 3-14, 16-20, and 22-34 were rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 5,692,469 to Rammer ("Rammer"). Claims 22-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 4,050,435 to Fuller, Jr. et al. ("Fuller"). Claims 22 and 24 were rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 4,423,709 to Arrieta ("Arrieta"). Claims 15 and 35-40 were rejected under 35 U.S.C. § 103(a) based on Rammer. Claims 1, 2, and 21 were rejected under 35 U.S.C. § 103(a) based on Rammer in view of United States Patent No. 5,996,550 to Israel ("Israel"). These rejections should be withdrawn for at least the reasons set forth in the following discussion.

Claim Objection

To obviate an inadvertent informality kindly noted by the Examiner, Applicant has corrected claim 14, so that it now depends from claim 13, as originally filed.

Rejections Under 35 U.S.C. § 102

Applicant respectfully requests the Examiner to withdraw the rejection of claims 3-14, 17-20, and 22-28 as being anticipated by Rammer, the rejection of claims 22-24 as being anticipated by Fuller, and the rejection of claims 22 and 24 as

being anticipated by Arrieta. The rejection of claims 16 and 29-34 is moot since those claims have been canceled.

In order to properly anticipate Applicant's claimed invention under § 102, a single prior art reference must disclose each and every element of the claim at issue, either expressly or under principles of inherency. Further, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." See M.P.E.P. § 2131. Also, "[t]he elements must be arranged as required by the claim." *Id.*

Rammer fails to disclose every recitation of independent claims 3, 9, 12, and 25. For example, amended claim 3, recites "wherein the engine valve element is an intake valve." The disclosure of Rammer relates only to an outlet valve 1 and makes no mention of an intake valve. Claim 3 is therefore allowable for at least the reasons discussed above.

Likewise, claim 9 recites "an intake valve", and claims 12 and 25, recite "wherein the valve is an intake valve." Thus, claims 9, 12, and 25 are also distinguishable from the cited art. Dependent claims 4-11, 13, 14, 17-20, and 26-28 ultimately depend from one of claims 3, 9, 12, and 25, and therefore, are allowable for at least the reasons discussed above and in view of their additional recitations of novel subject matter.

Each of Rammer, Fuller, and Arrieta fails to disclose every recitation of independent claim 22. For example amended claim 22 recites maintaining "an intake valve in an intermediate position between an open position and a closed position." As discussed above, Rammer does not disclose an intake valve. Neither Fuller nor Arrieta discloses maintaining any valve in an intermediate position. Claim 22 is therefore allowable for at least the reasons discussed above.

Dependent claims 23 and 24 ultimately depend from claim 22, and therefore, are allowable for at least the reasons discussed above and in view of their additional recitations of novel subject matter.

Rejections Under 35 U.S.C. § 103(a)

Applicants respectfully traverse the rejection of claims 35-40 based on Rammer and the rejection of claims 1, 2 and 21 based on Rammer in view of Israel. The rejection of claim 15 is moot since it has been canceled.

To establish *prima facie* obviousness under 35 U.S.C. § 103(a), three requirements must be met. First, the applied references, taken alone or in combination, must teach or suggest each and every element recited in the claims. See M.P.E.P. § 2143.03 (8th ed. 2001). Second, there must be some suggestion or motivation, either in the reference(s) or in the knowledge generally available to one of ordinary skill in the art, to combine or modify the reference(s) in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must "be found in the prior art, and not be based on applicant's disclosure." M.P.E.P. § 2143 (8th ed. 2001).

In rejecting claims 35-40, the Examiner has failed to establish a *prima facie* case of obviousness because (1) Rammer does not teach each and every element recited in the claims, and (2) neither Rammer nor the knowledge generally available to one of ordinary skill in the art, discloses or suggests any motivation, teaching, or suggestion for modifying the exhaust valve system of Rammer for intake valves.

The Examiner admits that Rammer only discloses opening an exhaust valve and that it does not disclose opening an intake valve. See Office Action, page 7. The

Examiner then asserts that “the use of valve actuation systems designed for one type of valve (exhaust) is well known in the art to be applicable to the other type of valve (intake)” and therefore using the valve system of Rammer for intake valves “would be a matter of obvious choice.” *Id.* Nothing, however, supports these assertions. Given the differently functionality of intake and exhaust valves, neither Rammer nor the knowledge generally available to one of ordinary skill in the art provides motivation to use an exhaust valve system for an intake valve.

As stated above, to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), there must be some suggestion or motivation, either in the reference(s) or in the knowledge generally available to one of ordinary skill in the art, to combine or modify the reference(s) in a manner resulting in the claimed invention. See M.P.E.P. § 2143 (8th ed. 2001). Rather than citing any source establishing a proper motivation, the Office Action asserts that using Rammer’s exhaust valve system for an intake valve would be “a matter of obvious choice.” This statement is conclusory, and is improperly made with hindsight in view of Applicant’s own disclosure.

Notably, although the Office Action asserts that “it would be a matter of obvious choice,” the Office Action does not cite any source or give any reasons *why*. At best, the Examiner merely speculates that it would depend “on space considerations, exhaust gas recirculation, and desired engine performance.” See, Office Action, page 7. The Office Action does not explain how “space considerations, exhaust gas recirculation, and desired engine performance” would cause one of ordinary skill in the art to modify a valve system clearly designed for an exhaust valve, in which the goal is to operate the exhaust valve to brake an engine (see Rammer, column 2, line 12). A *prima facie* case

has not been established because the Office Action fails to provide any motivation to use the system of Rammer for intake valves.

The Office Action does not cite any prior art providing a proper motivation to use the valve system of Rammer for an intake valve. Thus, the Office Action's conclusory statements alleging "a matter of obvious choice" must have been made only with hindsight in view of Applicant's specification.

Additionally, it appears that the Office Action has relied entirely on "official notice" in rejecting claims 35-40. The Office Action asserts that "the use of valve actuation systems designed for one type of valve (exhaust) is well known in the art to be applicable to the other type of valve (intake)." See Office Action, page 7. Applicant respectfully disagrees with this assertion. Operating an intake valves often has a much different effect on engine operation than operating exhaust valve, *see, i.e.,* specification, paragraphs 04 and 05, and it would not be obvious to modify an exhaust valve system for an intake valve.

Although it may be appropriate for an Examiner to take official notice of facts not in the record, such official notice should only be taken in *limited* circumstances and should be *judiciously* applied. See M.P.E.P. § 2144.03. Accordingly, should the Examiner maintain the rejection of the claims in view of the "official notice" doctrine, Applicant requests that the Examiner provide sufficient evidence, as required under M.P.E.P. § 2144.03.

In rejecting claim 1 and 21, the Office Action has failed to establish a *prima facie* case of obviousness at least because neither Rammer nor Israel discloses or suggests any motivation to combine these two references.

As stated above, to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), there must be some suggestion or motivation, either in the reference(s) or in the knowledge generally available to one of ordinary skill in the art, to combine or modify the reference(s) in a manner resulting in the claimed invention. See M.P.E.P. § 2143 (8th ed. 2001). In rejecting the claims, the Examiner has provided no proper motivation for using low pressure fluid which is insufficient to move the valve into an open position, instead asserted that it would be obvious “depending on fluid leakage, spring biasing, mechanical wear, and performance desirability.” See Office Action, page 8. This statement is conclusory, unsupported, and is improperly made with hindsight in view of Applicant’s own invention.

Notably, although the Office Action asserts that “it would be obvious” the Examiner has not given any reasons *why*. At best, the Examiner merely speculates that it would depend “on fluid leakage, spring biasing, mechanical wear, and performance desirability.” See Office Action, page 8. The Examiner does not explain how “fluid leakage, spring biasing, mechanical wear, and performance desirability” would cause one of ordinary skill in the art to use low pressure fluid which is insufficient to move the valve into an open position, or how it would impact the engine operation of Rammer. A *prima facie* case has not been established because the Office Action fails to provide any motivation to use low pressure fluid which is insufficient to move the valve into an open position.

Dependent claim 2 depends from claim 1 and therefore, is allowable for at least the reasons discussed above for claim 1 and in view of its additional recitations of novel subject matter. Dependent claims 36-40 ultimately depend from claim 35 and therefore,

are allowable for at least the reasons discussed above for claim 35 and in view of their additional recitations of novel subject matter.

Conclusion

Applicants respectfully request withdrawal of the Section 102(b) and Section 103(a) rejections and allowance of all of the pending claims.

The Office Action contains characterizations of the claims and the related art with which Applicants do not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in the Office Action.

If a telephone interview will expedite issuance of this application, the Examiner is requested to call Applicants' representative, whose name and registration number appear below, to discuss any remaining issues.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: 

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